

**Amendments to the claims:**

This listing of claims replaces all prior versions, and listings, of claims in the application.

**Listing of claims:**

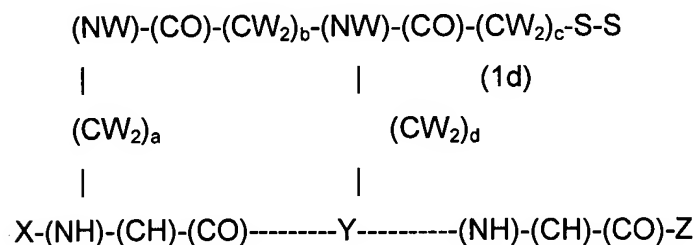
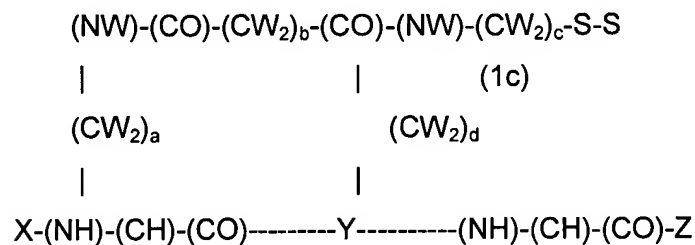
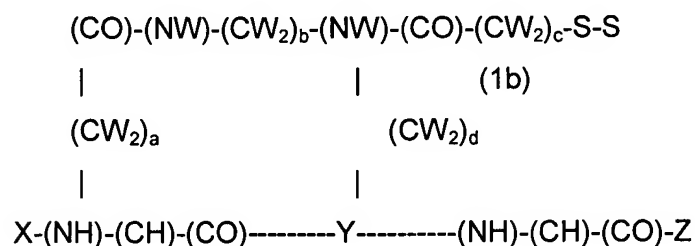
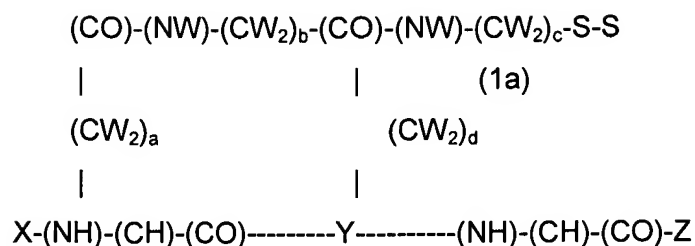
Claim 1 (original): Peptidic compounds having covalently closed bridge structures, which branch off from suitable amino acid side chains of a peptide with alpha-helical conformation and which connect at least two amino acid side chains of this peptide which are located at positions  $i$  and  $i + 7$  of the amino acid sequence of the peptide, thereby stabilizing the bridged part of the helix, wherein the bridge backbone, including the side chain atoms of amino acids  $i$  and  $i + 7$  of the peptide, consists of one or two amide (peptide) bonds, one disulfide bridge and further 7 to 11, preferably 9 C- or N-atoms.

Claim 2 (original): Peptidic compounds according to claim 1, wherein the bridge backbone comprises two amide (peptide) bonds, one sulfide bridge and further 7 carbon atoms.

Claim 3 (previously presented): Peptidic compounds according to claim 1, wherein the bridge is stabilized by hydrogen bonds between one or more amino acid side chain(s) of the peptide and the bridge, and the stabilizing amino acid(s) is/are selected from lysine, arginine, asparagine, glutamine, aspartic acid, glutamic acid, serine, threonine, tyrosine or histidine and is/are located at position(s)  $i + 3$  and/or  $i + 4$  of the peptides.

Claim 4 (original): Peptidic compounds according to claim 3, wherein the stabilizing amino acid(s) is/are aspartate at position  $i + 3$ , and/or lysine or glutamine at position  $i + 4$ .

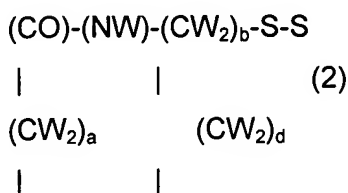
Claim 5 (previously presented): Peptidic compounds according to claim 1, and represented by the molecules covered by one of the formulas (1a) – (1d):



wherein X is hydrogen or any amino acid or any peptide or any compound represented by formula (1), (2) or (3), Y is any amino acid sequence consisting of six amino acids, Z is hydroxyl or any amino acid or any peptide or any compound represented by formula (1), (2) or (3); a, b, c and d are independently selected from the integers 1 to 3, provided that the sum  $a+b+c+d$  is 7, at each independent position of W, W can be freely chosen

from hydrogen, a hydroxyl-, carboxyl- or amino group, an alkyl moiety with at least one hydroxyl-, carboxyl- or amino group, a polyethyleneglycol moiety, or a naturally occurring or artificial sugar molecule, and the peptides can consist of natural and/or unnatural D- and/or L-amino acids.

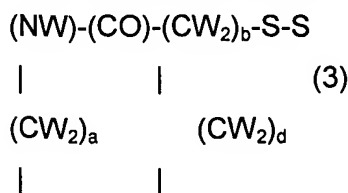
Claim 6 (previously presented): Peptidic compounds according to claim 1, and represented by the molecules covered by the generic formula (2):



X-(NH)-(CH)-(CO)-Y-(NH)-(CH)-(CO)-Z

wherein X is hydrogen or any amino acid or any peptide or any compound represented by formula (1), (2) or (3), Y is any amino acid sequence consisting of six amino acids, Z is hydroxyl or any amino acid or any peptide or any compound represented by formula (1), (2) or (3), a, b and d are independently selected from the integers 1 to 5, provided that a+b+d is 9; at each independent position of W, W can be freely chosen from hydrogen, a hydroxyl-, carboxyl- or amino group, an alkyl moiety with at least one hydroxyl-, carboxyl- or amino group, a polyethyleneglycol moiety, or a naturally occurring or artificial sugar molecule, and the peptides can consist of natural and/or unnatural D- and/or L-amino acids.

Claim 7 (previously presented): Peptidic compounds according to claim 1, and represented by the molecules covered by the generic formula (3):

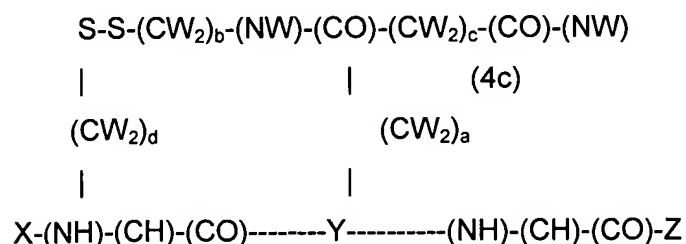
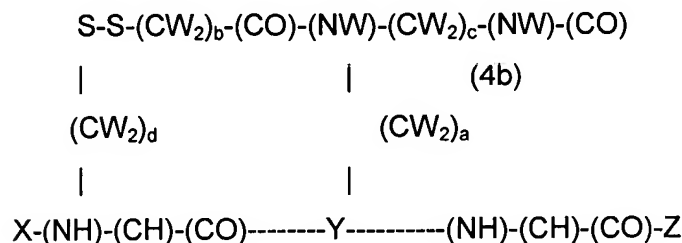
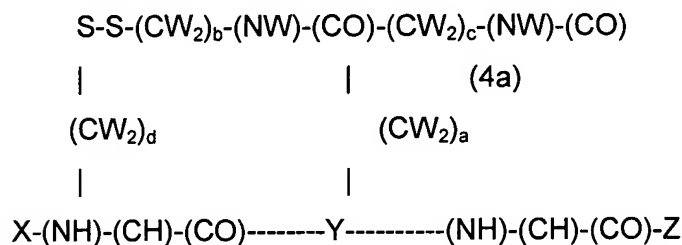


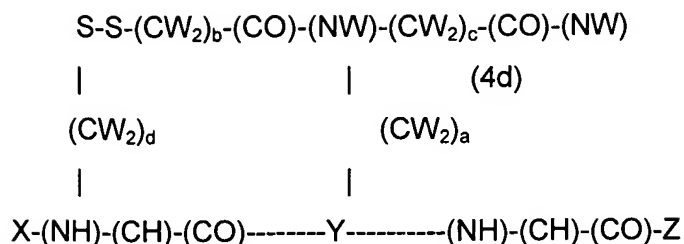
X-(NH)-(CH)-(CO)-Y-(NH)-(CH)-(CO)-Z

wherein X is hydrogen or any amino acid or any peptide or any compound represented by formula (1), (2) or (3), Y is any amino acid sequence consisting of six amino acids, Z

is hydroxyl or any amino acid or any peptide or any compound represented by formula (1), (2) or (3), a, b and d are independently selected from the integers 1 to 5, provided that a+b+d is 9, at each independent position of W, W can be freely chosen from hydrogen, a hydroxyl-, carboxyl- or amino group, an alkyl moiety with at least one hydroxyl-, carboxyl- or amino group, a polyethyleneglycol moiety, or a naturally occurring or artificial sugar molecule, and the peptides can consist of natural and/or unnatural D- and/or L-amino acids.

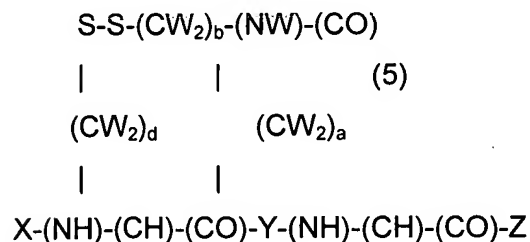
Claim 8 (previously presented): Peptidic compounds according to claim 1, and represented by the molecules covered by one of the formulas (4a) – (4d):





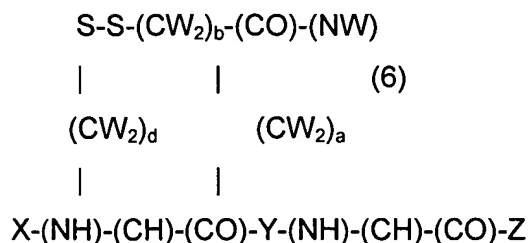
wherein X is hydrogen or any amino acid or any peptide or any compound represented by formula (1) to (2), Y is any amino acid sequence consisting of six amino acids, Z is hydroxyl or any amino acid or any peptide or any compound represented by formula (1) to (6), a, b, c and d are independently selected from the integers 1 to 3, provided that a+b+c+d is 7, at each independent position of W, W can be freely chosen from hydrogen, a hydroxyl-, carboxyl- or amino group, an alkyl moiety with at least one hydroxyl-, carboxyl- or amino group, a polyethyleneglycol moiety, or a naturally occurring or artificial sugar molecule, and the peptides can consist of natural and/or unnatural D- and/or L-amino acids.

Claim 9 (previously presented): Peptidic compounds according to claim 1, and represented by the molecules covered by the generic formula (5):



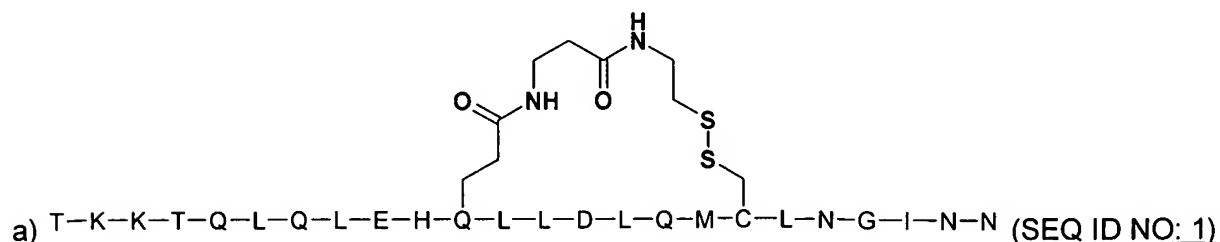
wherein X is hydrogen or any amino acid or any peptide or any compound represented by formula (1) to (6), Y is any amino acid sequence consisting of six amino acids, Z is hydroxyl or any amino acid or any peptide or any compound represented by formula (1) to (6), a, b and d are independently selected from the integers 1 to 5, provided that a+b+d is 9, W is hydrogen, a hydroxyl-, carboxyl- or amino group, an alkyl moiety with at least one hydroxyl-, carboxyl- or amino group, a peptide of maximally 30 amino acids, a polyethyleneglycol moiety, or a naturally occurring or artificial sugar molecule and the peptides can consist of natural and/or unnatural D- and/or L-amino acids.

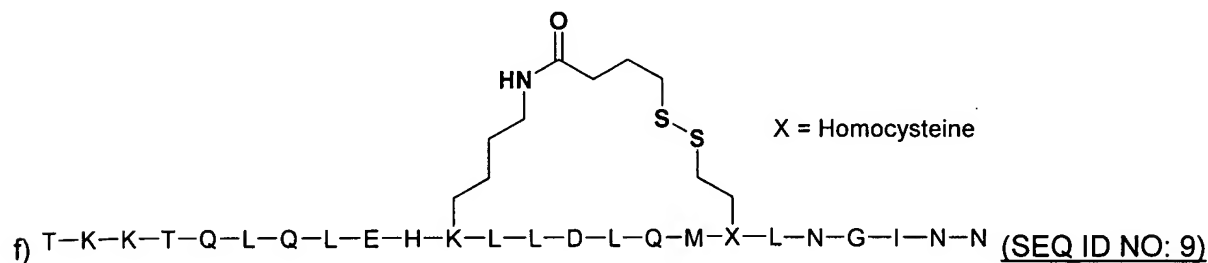
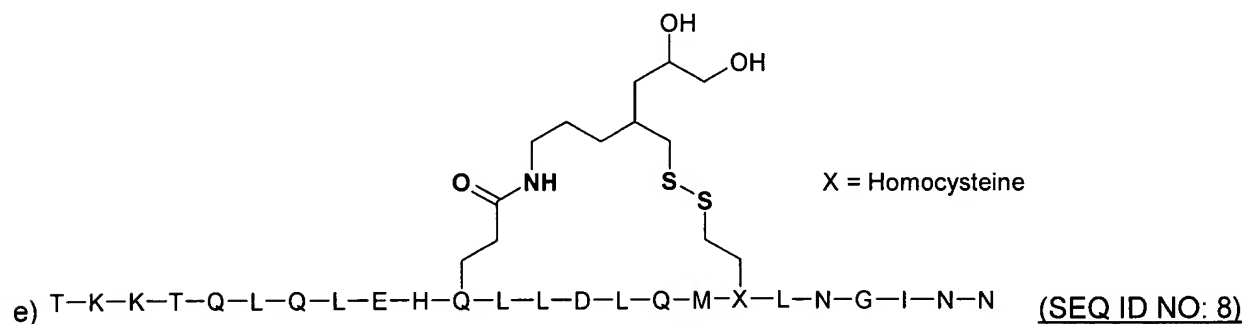
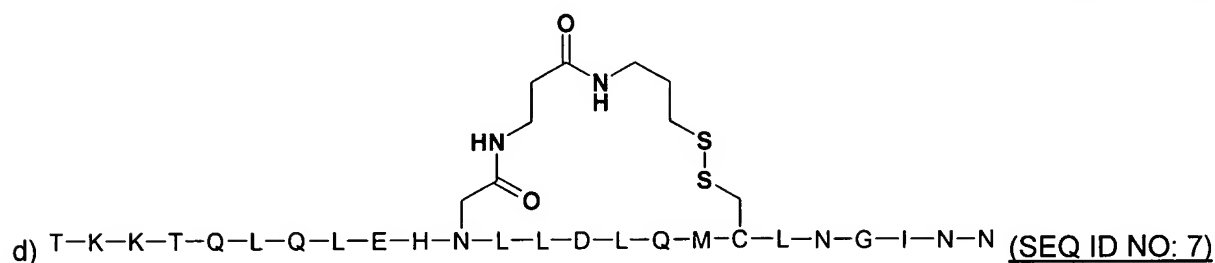
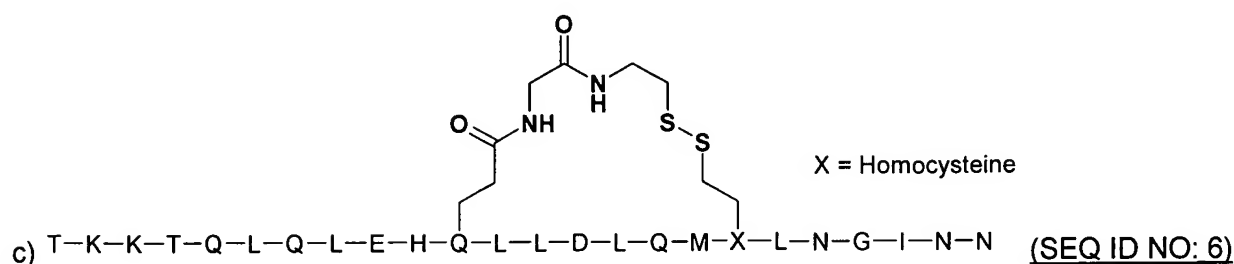
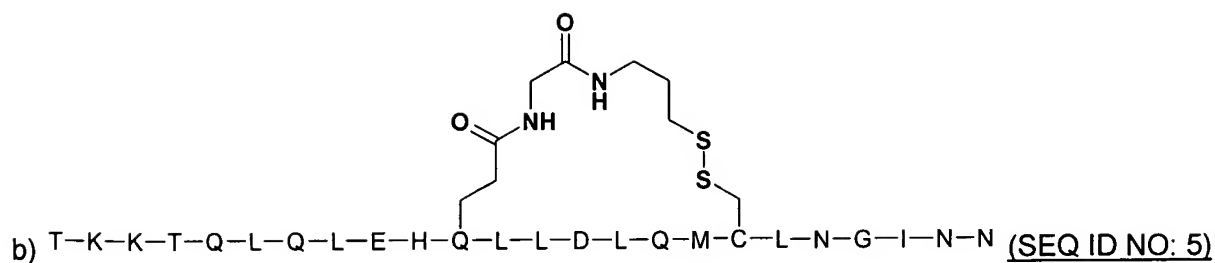
Claim 10 (currently amended): Peptidic compounds according to claim 1, and represented by the molecules covered by the generic formula (6):



wherein X is hydrogen or any amino acid or any peptide or any compound represented by formula (1) to (6), Y is any amino acid sequence consisting of six amino acids, Z is hydroxyl or any amino acid or any peptide or any compound represented by formula (1) to (6), a, b and d are independently selected from the integers 1 to 5, provided that  $a+b+d$  is 9, at each independent position of W, W can be freely chosen from hydrogen, a hydroxyl-, carboxyl- or amino group, an alkyl moiety with at least one hydroxyl-, carboxyl- or amino group, a polyethyleneglycol moiety, or a naturally occurring or artificial sugar molecule, and the peptides can consist of natural and/or unnatural D- and/or L-amino acids.

Claim 11 (currently amended): Peptidic compounds according to ~~claims 1-10~~ claim 1, binding to the interleukin 2 receptor and containing the stabilized peptide sequence TKKTQLQLEHKLLDLQMXLNGINN in a helical conformation, where X stands for homocysteine and two helical turns are bridged by a backbone according to ~~claims 1-10~~ claim 1; thereby including non-exclusively the sequences and structures (a- f) as follows:





Claim 12 (original): Peptidic compounds according to claim 11, in which the bridging structure is shifted along the peptide sequence in such a way that binding to the interleukin 2

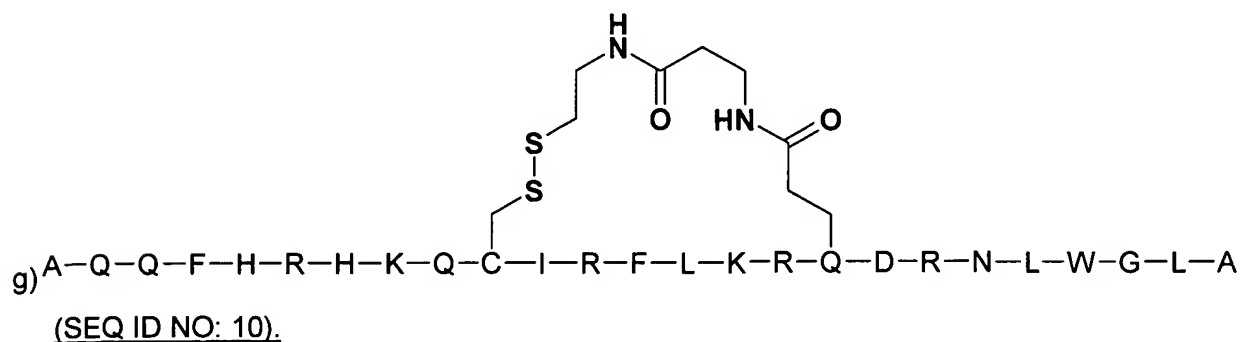
receptor is maintained and another part of the overall helical structure is bridged by the construct.

Claim 13 (previously presented): Peptidic compounds according to claim 11, in which at least one amino acid of the peptide sequence is replaced by physicochemically related natural or non-natural amino acids in a conservative exchange, which maintains the binding of the peptide to the Interleukin 2 Receptor.

Claim 14 (previously presented): Peptidic compounds according to claim 11, which are N- and/or C-terminally modified in such a way that the binding of the peptide to the Interleukin 2 receptor is maintained and/or water solubility is improved and/or that exopeptidases can not cleave at the terminal sites, whereby terminal modifications include non-natural amino acids, D-amino acids, sugar moieties or freely chosen appropriate organic moieties.

Claim 15 (previously presented): Pharmaceutical preparations containing an active ingredient according to claim 11 and intended for use in humans or animals as an antagonist of the action of the cytokine Interleukin 2.

Claim 16 (currently amended): Peptidic compounds according claim 1, binding to the interleukin 4 receptor and containing the stabilised peptide sequence AQQFHRHQCIRFLKRQDRNLWGLA (SEQ ID NO: 16) in a helical conformation, wherein two helical turns are bridged by a backbone according to claims 1-10; thereby including non-exclusively the following sequence and structure (g):





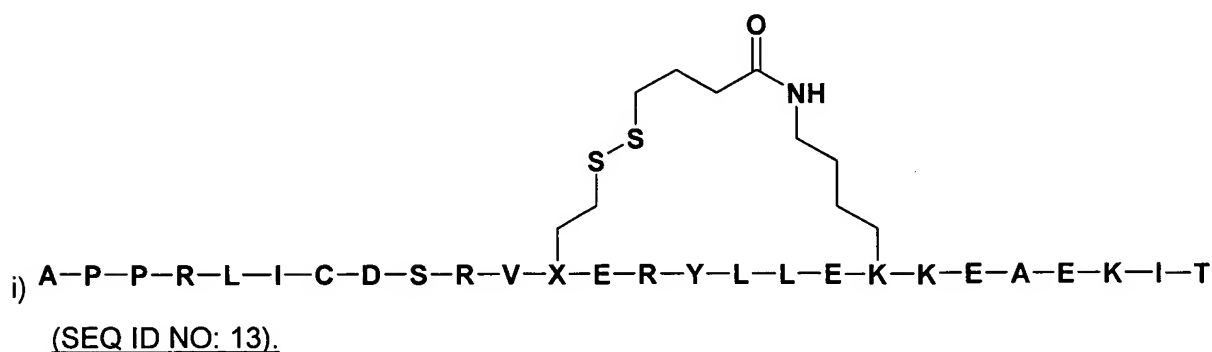
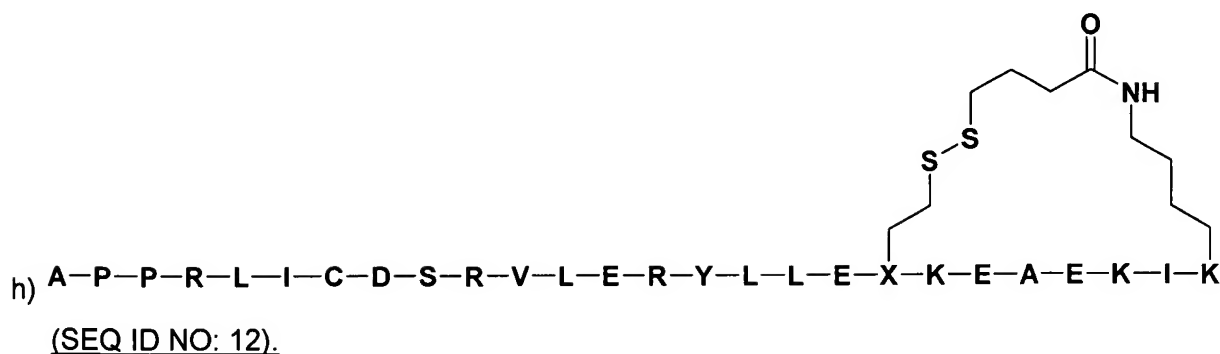
Claim 17 (original): Peptidic compounds according to claim 16, in which the bridging structure is shifted along the peptide sequence in such a way that binding to the interleukin 4 receptor is maintained and another part of the overall helical structure is bridged by the construct.

Claim 18 (previously presented): Peptidic compounds according to claim 16, in which at least one amino acid of the peptide sequence is replaced by physicochemically related natural or non-natural amino acids in a conservative exchange, which maintains the binding of the peptide to the Interleukin 4 receptor.

Claim 19 (previously presented): Peptidic compounds according to claim 16, which are N- and/or C-terminally modified in such a way that the binding of the peptide to the Interleukin 4 receptor is maintained and/or water solubility is improved and/or that exopeptidases can not cleave at the terminal sites, whereby terminal modifications include non-natural amino acids, D-amino acids, sugar moieties or freely chosen appropriate organic moieties.

Claim 20 (previously presented): Pharmaceutical preparations containing an active ingredient according to claim 16 and intended for use in humans or animals as an antagonist of the action of the cytokine Interleukin 4.

Claim 21 (currently amended): Peptidic compounds according claim 1, binding to the erythropoietin receptor and containing the stabilised peptide sequence APPRLICDSRVLERYLLEXKEAEKIK (SEQ ID NO: 17) in a helical conformation, wherein two helical turns are bridged by a the backbone ~~according to claim 1~~; thereby including non-exclusively the following sequences and structures (h-i):



Claim 22 (original): Peptidic compounds according to Claim 21, in which the bridging structure is shifted along the peptide sequence in such a way that binding to the erythropoietin receptor is maintained and another part of the overall helical structure is bridged by the construct.

Claim 23 (previously presented): Peptidic compounds according claim 21, in which at least one amino acid of the peptide sequence is replaced by physicochemically related natural or non-natural amino acids in a conservative exchange, which maintains the binding of the peptide to the erythropoietin receptor.

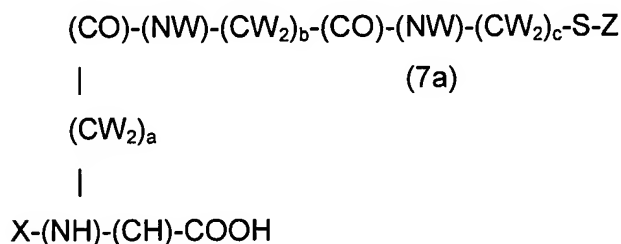
Claim 24 (previously presented): Peptidic compounds according to claim 21, which are N- and/or C-terminally modified in such a way that the binding of the peptide to the erythropoietin receptor is maintained and/or water solubility is improved and/or that exopeptidases can not cleave at the terminal sites, whereby terminal modifications include non-natural amino acids, D-amino acids, sugar moieties or freely chosen appropriate organic moieties.

Claim 25 (previously presented): Pharmaceutical preparations containing an active ingredient according to claim 16 and intended for use in humans or animals as an agonist of the action of the cytokine erythropoietin.

Claim 26 (previously presented): Mono- and polyclonal antibodies to the substances covered by claim 1, and the use of such antibodies in diagnostic and pharmacological quantification and/ or inhibition of action of the active substances in body fluids or tissues of animals or humans.

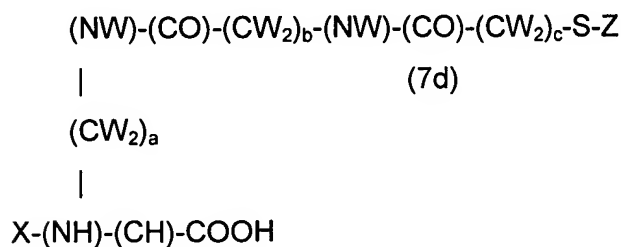
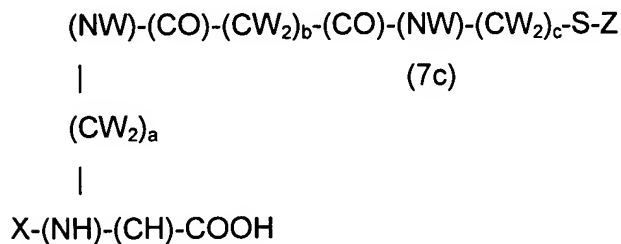
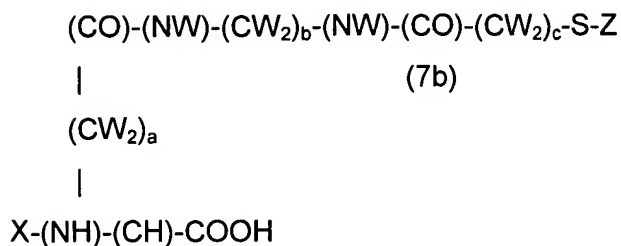
Claim 27 (previously presented): Peptidic compounds according to claim 1, in which the N-terminal amino acid is acetylated and/or the C-terminal amino acid is amidated.

Claim 28 (previously presented): Use of a compound according to the generic formula (7a):



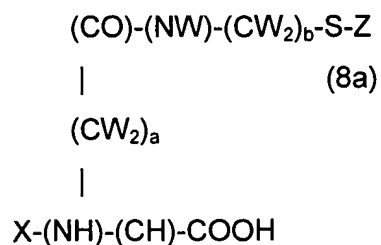
as building block for the synthesis of peptidic compounds of claim 1, wherein X or Z are hydrogen or any protecting group; a, b, and c are independently selected from the integers 1 to 3, provided that the sum  $a+b+c$  is an integer from 3 to 6, at each independent position of W, W can be freely chosen from hydrogen, a hydroxyl-, carboxyl- or amino group, an alkyl moiety with at least one hydroxyl-, carboxyl- or amino group, a polyethyleneglycol moiety, or a naturally occurring or artificial sugar molecule.

Claim 29 (previously presented): Compounds as building blocks for the synthesis of peptidic compounds of claim 1, represented by the molecules covered by the generic formulas (7b) to (7d):



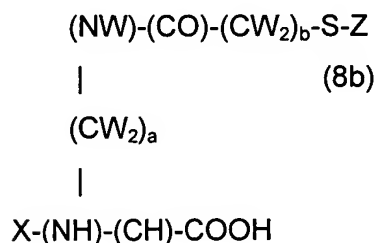
wherein X and Z are hydrogen or any protecting group; a, b, and c are independently selected from the integers 1 to 3, provided that the sum a+b+c is an integer from 3 to 6, at each independent position of W, W can be freely chosen from hydrogen, a hydroxyl-, carboxyl- or amino group, an alkyl moiety with at least one hydroxyl-, carboxyl- or amino group, a polyethyleneglycol moiety, or a naturally occurring or artificial sugar molecule.

Claim 30 (previously presented): Use of a compound according to formula (8a):



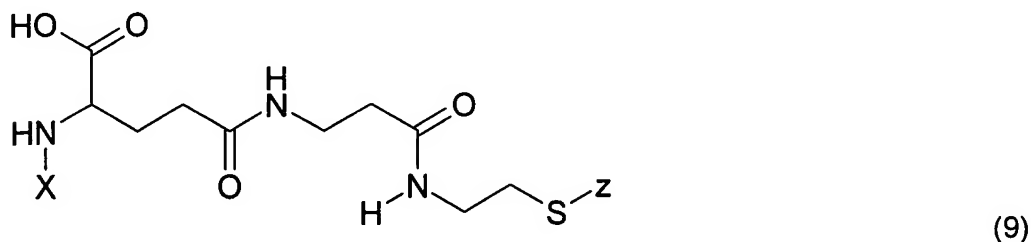
as building block for the synthesis of peptidic compounds of any of claim 1, wherein X and Z are hydrogen or any protecting group; a and b are independently selected from the integers 1 to 5, provided that the sum a+b is an integer from 2 to 8, at each independent position of W, W can be freely chosen from hydrogen, a hydroxyl-, carboxyl- or amino group, an alkyl moiety with at least one hydroxyl-, carboxyl- or amino group, a polyethyleneglycol moiety, or a naturally occurring or artificial sugar molecule.

Claim 31 (previously presented): Compounds as building blocks for the synthesis of peptidic compounds of claim 1, represented by the formula (8b):

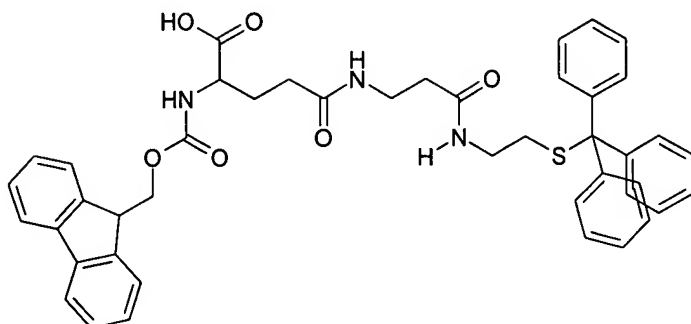


wherein X and Z are hydrogen or any protecting group; a and b are independently selected from the integers 1 to 5, provided that the sum a+b is an integer from 2 to 8, at each independent position of W, W can be freely chosen from hydrogen, a hydroxyl-, carboxyl- or amino group, an alkyl moiety with at least one hydroxyl-, carboxyl- or amino group, a polyethyleneglycol moiety, or a naturally occurring or artificial sugar molecule.

Claim 32 (original): Use according to claim 28 of the formula (9), wherein X and Z are hydrogen or any protecting group:



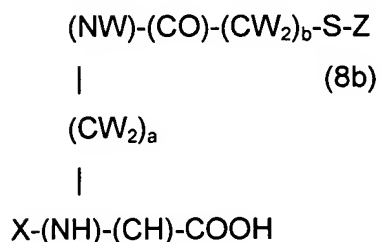
Claim 33 (original): Use according to claim 32 of the formula (10):



Claim 34 (previously presented): Methods for synthesis of building blocks according to claim 29 via solid phase synthesis.

Claim 35 (currently amended): Methods for synthesis of peptidic compounds according to claim 1 comprising the following steps:

- a. ~~Synthesizing~~ synthesizing an intermediate peptidic compound by means of peptide synthesis from C- to N-term, comprising introduction of an amino acid containing a protected SH function in its side chain at position  $i+7$  (i.e. introduction after deprotection of the N-term of the amino acid at position  $i+8$ ), followed by the introduction of six amino acids at positions  $i+6$  to  $i+1$ , and furthermore followed by introduction of a building block at position  $i$  (i.e. after deprotection of the N-term of the amino acid at position  $i+1$ ) of the growing peptide chain, the building block being represented by the formula (8b):



wherein X and Z are hydrogen or any protecting group; a and b are independently selected from the integers 1 to 5, provided that the sum  $a+b$  is an integer from 2 to 8,

at each independent position of W, W can be freely chosen from hydrogen, a hydroxyl-, carboxyl- or amino group, an alkyl moiety with at least one hydroxyl-, carboxyl- or amino group, a polyethyleneglycol moiety, or a naturally occurring or artificial sugar molecule,

- b. continuation of the peptide synthesis until the N-terminal amino acid was introduced,
- c. removal of the remaining protecting groups,
- d. establishing helix-stabilizing conditions, for example with appropriate fluorinated solvents,

obtaining the peptidic compound by closure of a disulfide bridge with appropriate reagents under these helix-stabilizing conditions.